

### **REMARKS**

Favorable reconsideration, reexamination, and allowance of the present patent application are respectfully requested in view of the foregoing amendments and the following remarks. The foregoing amendments are made to clarify the meaning of the claims and are fully supported throughout the specification and original claims, and at least, on page 15, lines 5-11. No new matter is added.

#### ***Amendments***

Claim 1 is amended. Claims 2 and 31 were previously cancelled. Claims 4-30 are withdrawn. Claims 1, 3, 31, and 32 are under examination.

#### ***Rejection under 35 U.S.C. § 112, first paragraph***

In the Office Action, beginning at page 4, Claims 1, 3, 32, and 33 were rejected under 35 U.S.C. § 112, first paragraph, as reciting subject matters that allegedly fail to comply with the written description requirement. Applicant respectfully requests reconsideration of this rejection.

It is stated on page 4, last line, of the Office Action that the claims are not limited to a variation of 1 to 5 amino acids. It is unclear how this interpretation of the claim language was arrived at, however, the claims have been amended to clarify that only between 1 and 5 changes, whether they are deletions, substitutions, insertions, or additions, can possibly occur in the specified sequences. This is a very small variation and well within the skilled art worker's expertise to determine variant proteins which will maintain the required function. This is because at the time of the invention, there was much known in the art concerning amino acid substitutions and other variations, and how such changes can effect the three-dimensional structure of a protein. Since the skilled art worker would could easily and readily predict which changes might be made within the small variation recited in the claims while still maintaining a functional protein, that is, while still imparting to the expressing bacteria increased resistance to L-amino acids, the genus encompassed by the claims is fully and adequately described.

For at least the foregoing reasons, Applicant respectfully submits that Claims 1, 3, 32, and 33 fully comply with 35 U.S.C. § 112, first paragraph, and therefore respectfully

requests withdrawal of the rejection thereof under 35 U.S.C. § 112.

In the Office Action, beginning at page 4, Claims 1, 3, 32, and 33 were rejected under 35 U.S.C. § 112, first paragraph, as reciting subject matters that allegedly fail to comply with the scope of enablement requirement. Applicant respectfully requests reconsideration of this rejection.

Again, it seems that the basis for this rejection is founded on the interpretation that an unlimited number of variations are encompassed by the claims. As explained above, the claims have been amended to clarify that only between 1 and 5 changes, whether they are deletions, substitutions, insertions, or additions, can possibly occur in the specified sequences. It is clear that one of ordinary skill in the art would be enabled to make and use the bacteria having these proteins and their limited variants with some experimentation, that is determining those that keep their function of imparting amino acid resistance, but such experimentation is merely routine and not undue. This is because much is known in the art regarding protein structure and function, and since the variation is so small, that is, only between 1 and 5 changes, such changes could be readily ascertained to be sufficient to maintain function or not. Furthermore, the argument on page 10 of the Office Action regarding the pure mathematical number of variants also does not apply. Claim 33 is dependent on claim 1, and therefore, merely further limits it. Therefore, although the DNA recited in the claims must hybridize under the stated stringent conditions, this is further limiting of the recitation in claim 1 that the encoded protein from such DNA can only have 1-5 changes over the entire sequence. In additions, the skilled art worker would not have to make every variant to determine activity, but would be able to use their skill and knowledge that conservative changes increase the chance for retention of activity, whereas non-conservative changes do not. Such experimentation is clearly routine and not undue.

For at least the foregoing reasons, Applicant respectfully submits that Claims 1, 3, 32, and 33 fully comply with 35 U.S.C. § 112, first paragraph, and therefore respectfully requests withdrawal of the rejection thereof under 35 U.S.C. § 112.

***Rejection under 35 U.S.C. § 112, second paragraph***

In the Office Action, beginning at page 11, Claims 1, 3, 32, and 33 were rejected under 35 U.S.C. § 112, second paragraph, as reciting subject matters that allegedly are indefinite. Applicant respectfully requests reconsideration of this rejection.

The claim has been amended to address the asserted vague and/or indefinite language. For at least the foregoing reasons, Applicant respectfully submits that Claims 1, 3, 32, and 33 fully comply with 35 U.S.C. § 112, second paragraph, and therefore respectfully requests withdrawal of the rejection thereof under 35 U.S.C. § 112.

***Conclusion***

For at least the foregoing reasons, Applicant respectfully submits that the present patent application is in condition for allowance. An early indication of the allowability of the present patent application is therefore respectfully solicited.

If Examiner Gangle believes that a telephone conference with the undersigned would expedite passage of the present patent application to issue, he is invited to call on the number below.

It is not believed that extensions of time are required, beyond those that may otherwise be provided for in accompanying documents. However, if additional extensions of time are necessary to prevent abandonment of this application, then such extensions of time are hereby petitioned under 37 C.F.R. § 1.136(a), and the Commissioner is hereby authorized to charge fees necessitated by this paper, and to credit all refunds and overpayments, to our Deposit Account 50-2821.

Respectfully submitted,

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Date: September 12, 2007